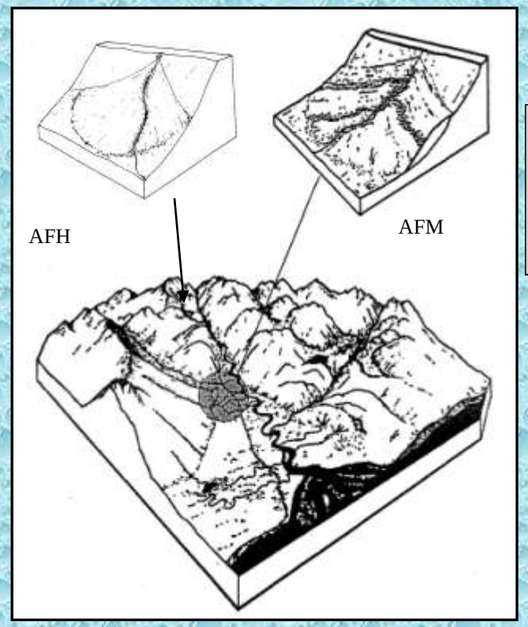


Alluvial Fan Process Group

Geomorphic Setting: The AFM channel is exclusively associated with the alluvial fan landform, which is situated between steep mountainslopes or hillslopes and flat valley bottoms or lowlands. AFM streams lie adjacent to and merge with low gradient flood plain streams. The alluvial fan landform is normally convex in cross-section profile, with steep gradient at the apex, moderate gradient through the middle section and low gradient at the bottom. The AFM channel may be a poorly contained single thread or multi-branched due to large woody debris diversions.

The AFH channel flow over steep alluvial cone landforms, typically situated in steep v-shaped valleys. Often the AFH is subjected to snow avalanches and debris torrents

Channel Types:
AFM—Moderate Gradient Alluvial Fan
AFH—High Gradient Alluvial Cone

AFM Mean Stream Gradient: 6%
AFH Stream Gradient: 25%

Hydrologic Function: sediment transport

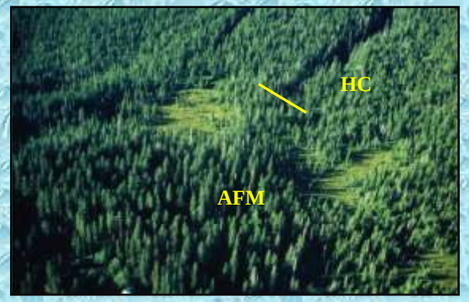
AFM Stream Class: I or II
AFH Stream Class: II or III

AFMe Phase: The bedload deposition process that produces the alluvial fan landform may be episodic rather than a constant rate of delivery. The upstream supply source may lie dormant for years before a mass wasting event provides material for transport. "Older' alluvial fans may be in a dormant bedload delivery state allowing the stream to downcut through the deposited material. This channel entrenchment is not apparent from remote sensing. Field observation is needed to establish this entrenchment (e) phase of the AFM channel type

Management Concern for:	AFM	AFH
Large Wood	High	Moderate
Sediment retention	High	Moderate
Stream banks senstivity	High	High
Sideslope senstivity	N/A	N/A
Flood Plain protection need	High	High
Culvert Fish passage	High	Low

The Alluvial Fan process group channel can contain several different bedforms. In entrenched single channel bed fans step-pool and cascade bedforms are common. However, on lower gradient sections uncontained dispersed flow is common.

Riparian Management Area: Greater of active portion of the alluvial fan or 140 ft (site potential tree height). No more than 10% of fan harvested in a 30 year (TLMP S&Gs).
period

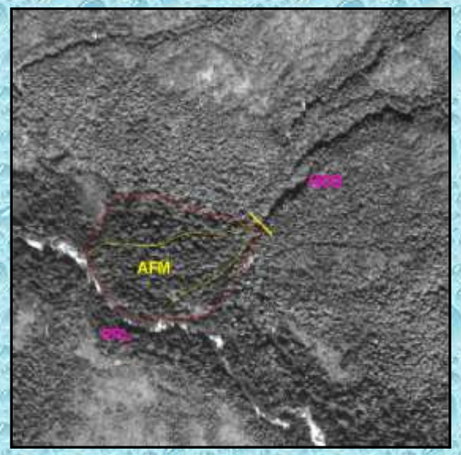


Landscape position of AFM.

AFH channel, steep profile, brush species dominant .

Uncontained flow. Stika Spruce is dominant plant association on AFM channels

Typical AF location, on footslope between HC and FP channeltypes.



Typical AF2 upper valley location and associated channeltypes